



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,909	11/21/2003	Bulent M. Basol	NT-306-US	8943
20995	7590	08/15/2005	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP			DANG, PHUC T	
2040 MAIN STREET			ART UNIT	
FOURTEENTH FLOOR			PAPER NUMBER	
IRVINE, CA 92614			2818	

DATE MAILED: 08/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/719,909

Applicant(s)

BASOL, BULENT M.

Examiner

PHUC T. DANG

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on election filed on February 7, 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-12 is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 2818

DETAILED ACTION

Response to Arguments

1. Applicant's argument filed on June 16, 2005 with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al., hereinafter "Lee" (U.S. Patent No. 2003/0054729 A1).

Regarding claim 1, Lee discloses a method for removing conductive material from a microelectronic substrate comprising:

contacting the overburden conductive material 111 with a conductive member 140 insulatively coupled to an electrode 120;

applying a voltage between the conductive member 140 and the electrode 120; and
establishing relative motion between the workpiece 160 and the conductive member insulatively coupled to the electrode 120; and

electrochemically remove the overburden conductive material 111 on the surface of the workpiece 160 [Fig. 3 and paragraph 0032].

Lee discloses the structures of the claimed invention as discussed above, but does not

Art Unit: 2818

disclose a porous conductive member is applied in the process.

However, a porous conductive member is considered to be obvious in design of choice, since any member of a structure can be designed to perform better in the process.

Thus, it would have been obvious to one having ordinary skilled in the art at the time the invention was made to modify the above teaching of Lee for a purpose of removing overburden more smoothly.

Regarding claims 3 and 5, Lee discloses a further step of comprising maintaining a gap in a range of 0.1 to 5 millimeters between the electrode and the porous conductive member [0008].

Regarding claim 4, Lee discloses a further step of comprising bridging the gap (D1, Fig. 3) between the electrode and the porous conductive member.

Regarding claim 6, Lee discloses the step of contacting the overburden conductive material 11 includes laying an area of the porous conductive member 140 on the overburden conductive material 111 [Fig. 3].

4. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Ohmori et al., hereinafter "Ohmori" (U.S. Patent No. 6,506,103).

Regarding claims 7-9, Lee disclose all the features of the claimed invention as discussed above, but does not disclose the step of processing performed by establishing relative motion with the overburden conductive material.

Art Unit: 2818

Ohmori, however, discloses the step of processing performed by establishing relative motion with the overburden conductive material [col. 6, lines 15-20].

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to modify the above discussed teaching of Lee as taught by Ohmori for a purpose of improving a process.

5. Lee discloses the claimed invention except for the process parameters as claimed in claim 2. However, the selection of the claimed process parameters would have been obvious to one having ordinary skill in the art at the time the invention was made to improve the process, since it is well settle that when the general conditions of a claim are discloses in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Allowable Subject Matter

6. Claims 10-12 would be allowed.

The following is a statement of reason for the indication of allowable subject matter:

Claims 10-12 are considered allowable since the prior art of record and the considered pertinent to the applicant's disclosure does not teach or suggest the claimed invention having comprising self-limiting the eletrochemical removal of the overburden conductive material after exposing the cavity conductive material as cited in claim 10.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Manens'970 and Mukherjee'229 and Horie'605 are cited interest.

Art Unit: 2818

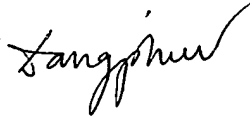
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuc T. Dang whose telephone number is (571) 272-1776. The examiner can normally be reached on 8:00 am-5:00 pm.

9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and After Final communications.

10. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Phuc T. Dang

PD



Primary Examiner

Art Unit 2818